PATENT SPECIFICATION

152,018

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COMPLETE SPECIFICATION.

Improvements in Ball Bearings.

I, MARIUS JEAN BAPTISTE BARBAROU, of 28, Place Saint-Ferdinand, Paris, Seine, France, a French citizen, Engineer, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

The present invention relates to the construction of a ball bearing which is enabled to support on the one hand the stresses perpendicular to the axis of rotation and on the other hand the stresses parallel to said axis.

Ball bearings are already known in which two sets of balls are provided, each set being adapted to support one of the two stresses and the size of the balls of each set being in accordance with the loads which may be caused to act upon the same.

But when the balls of said bearings are maintained in their relative position by means of cages, two cages are provided, one for each set, one being disposed in a plane perpendicular to the axis of rotation and the other in a plane parallel to said axis.

This invention has for its object a ball bearing with two sets of balls the diameter of which is different for each set, and adapted to form a support for radial and for axial stresses characterised in that it comprises one cylindrical cage made in a single piece of sheet metal holding at the same time all the balls of both sets in position, the centres of the balls of both sets being situated at the same distance from the axis of rotation.

The improved bearing according to this invention is represented by way of example in the accompanying drawings in which:

Figure 1 is a section in detail on a large scale.

Figure 2 represents a section of the holder taken through the centers of the large balls on the right and through the centers of the small balls on the left.

Figure 3 shows a general section of the bearing.

It will be observed in the drawings that the roller paths of the large ring 1 are directed towards the exterior in order to facilitate the construction of the same, inasmuch as the grinding tool and its shaft can be more readily removed therefrom.

The internal roller paths converge towards each other, and are cut in the two ring shaped members 2 and 3, one of which is employed for holding the balls of large diameter 5 and the other for holding the balls of smaller diameter 6, and this will permit the construction of these rolling paths under relatively easy conditions.

The said balls are maintained in position by a sheet metal holder or cage 4, and the construction of this member is such that the balls are maintained at the same distance from the axis of rotation, whereby the said holder may be very simply constituted by a ring which is made in a single piece.

Inasmuch as the two sets of balls have the same radius of path they will be driven forward at an equal speed, thus practically obviating any relative slipping of the balls upon the races.

Having now particularly described and ascertained the nature of my said inven-

[Price 1/-]

Fig. 1.

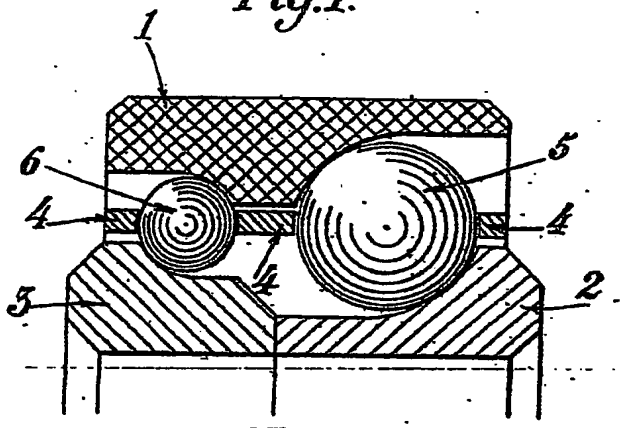


Fig. 2

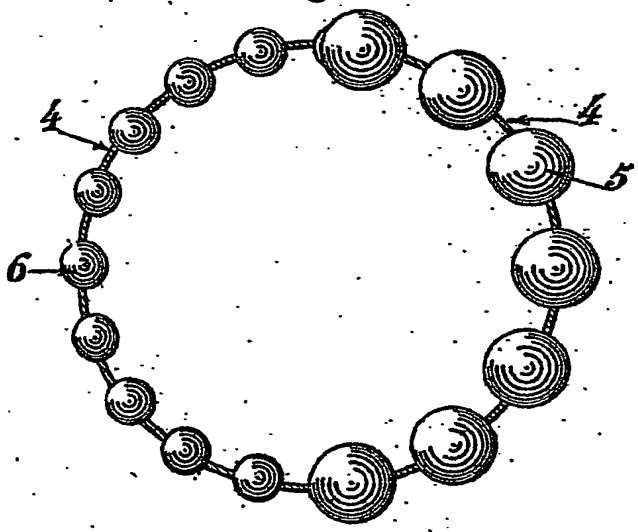
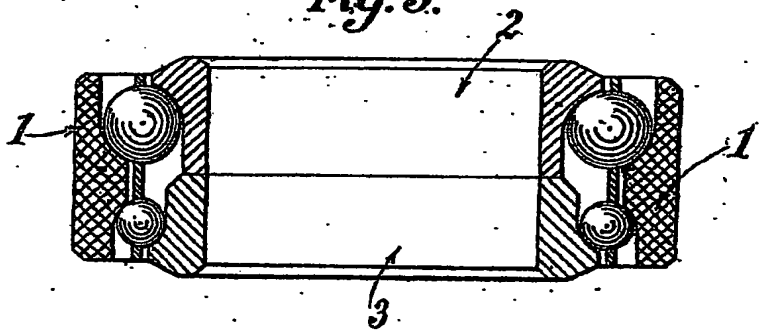


Fig. 3.



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